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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,627	08/06/2001	Joel Q. Xue	39199-9517-00	8281

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EXAMINER

MACHUGA, JOSEPH S

ART UNIT	PAPER NUMBER
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3762

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DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,627

Applicant(s)

XUE ET AL.

Examiner

Joseph S. Machuga

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-16, 18-22, 24-39, 42-44, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 7, 17, 40, 41, 45 and 48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Response to Amendment

Applicant's arguments are considered moot given the new grounds of rejection. However, addressing the following rejection of the current claims applicant should note that given the broad nature of the claims the JP patent #6-63026 would disclose all the claimed features including the steps of obtaining a physiological signal; determining an area to display (i.e. the heart); constructing a virtual image with a large number of polygons as illustrated in the picture below; transforming the data; assigning or plotting the data in the polygons; assigning a visual character (note figure 7); and displaying. Other points to note, the colors (different shades of gray) are assigned as illustrated in Figure 7 and while not specified the greater the number of polygons the greater the resolution therefore using 192 or 200 or 250 etc. is considered obvious as explained below.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

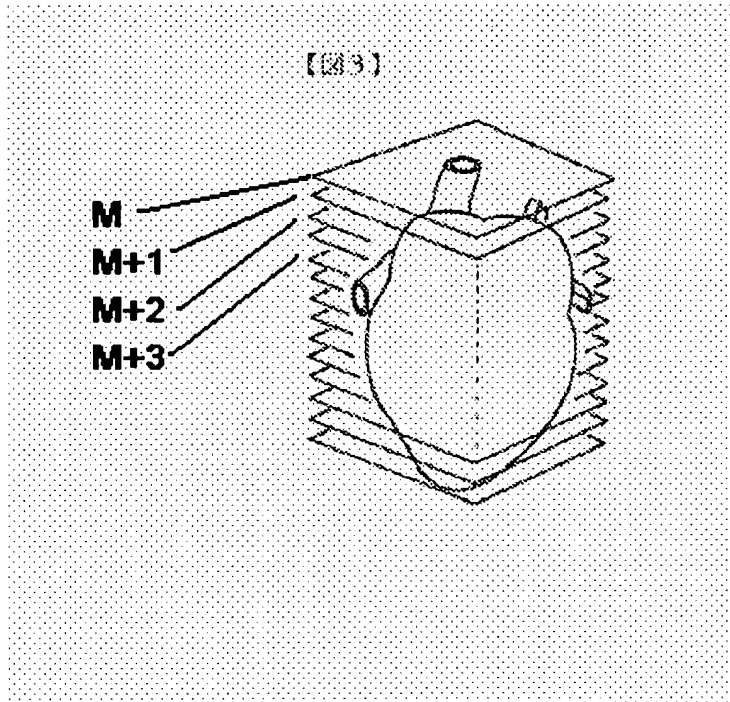
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8-16, 19, 20, 22, 24, 25 and 27-31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP#6-63026. The Japanese patent discloses an ECG display system having M-polygons (note the figure below.) The

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device also performs a 12 lead ECG analysis and body mapping using a 9 cable set.



3. Claims 32, 33, 42, 43, 44, 46 and 47 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Evans et al #5161539.

4. Evans et al discloses a 12 lead ECG mapping system. The system collects the data (N-voltage signals) from the sensors; integrates the signals into a larger data base (M-values); then optimizes the integrated signals (P-values) to search for specific heart ailments.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 18, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP#6-63026. To use 192 slices or more to construct the image is considered an obvious since it would increase the detail of the figure.

Regarding claim 26 it is considered obvious that the data would be stored in a memory chip and therefore the step of reading that data from memory would have been obvious.

7. Claims 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al #5161539 in view of Elghazzawi #5819007.

8. Evans et al discloses a 12 lead ECG mapping system. The system collects the data (N-voltage signals) from the sensors; integrates the signals into a larger data base (M-values); then optimizes the integrated signals (P-values) to search for specific heart ailments.

9. Elghazzawi teaches that it is old and well known to analyze an ECG signal according to such methods as pattern recognition, neural networks, fuzzy logic

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and Bayesian logic to anticipate possible cardiac problems. Given this teaching it would have been obvious to one of ordinary skill in the art to process the data in Evans device according to any of these four methods to help diagnose cardiac problems.

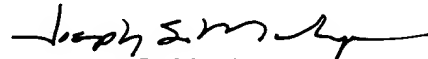
Claims 7, 17, 23, 40, 41, 45 and 48 are objected to as being dependent upon a rejected claim but would be allowable if written in dependent form including all the limitations of the base claim and any intermediate claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Machuga whose telephone number is 703-305-6184. The examiner can normally be reached on Monday-Friday; 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D Sykes can be reached on 703-308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph S. Machuga
Examiner
Art Unit 3762



ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700